

FIG.1

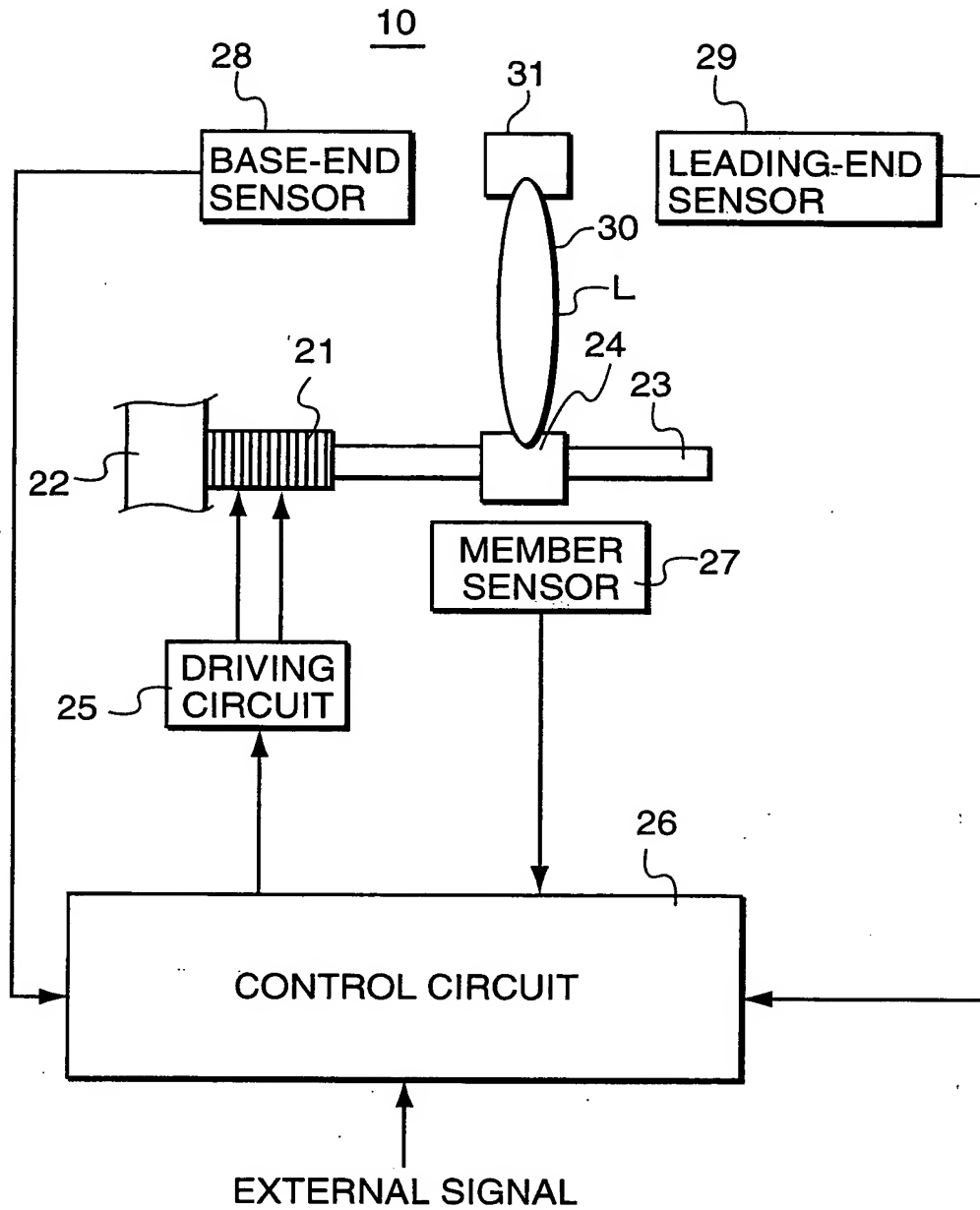


FIG.2

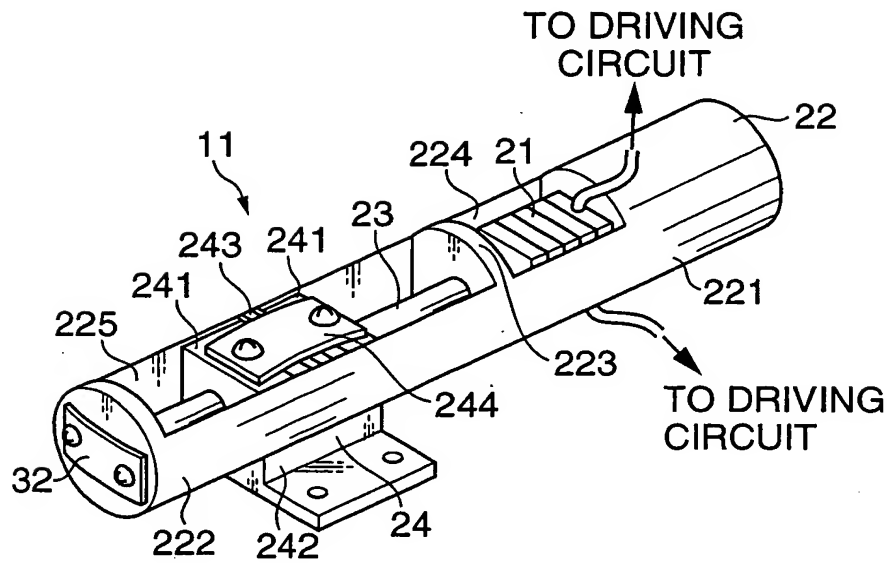


FIG.3

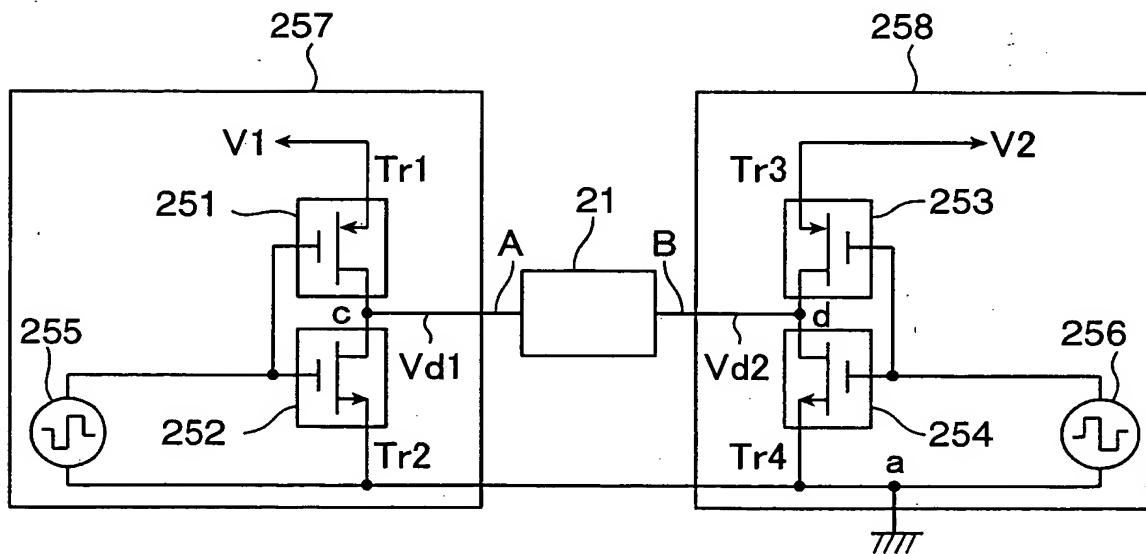


FIG.4A

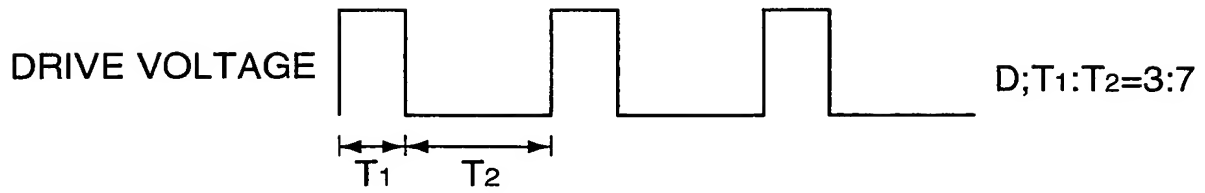


FIG.4B

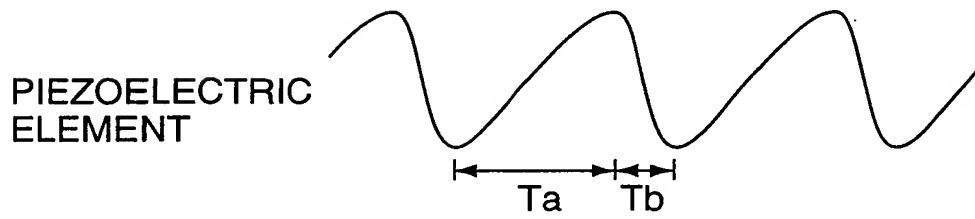


FIG.4C

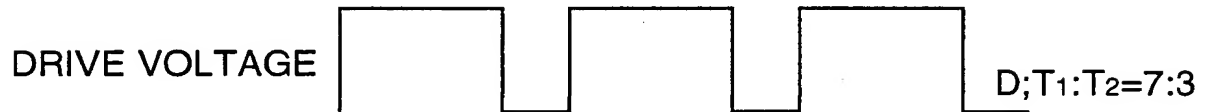


FIG.4D

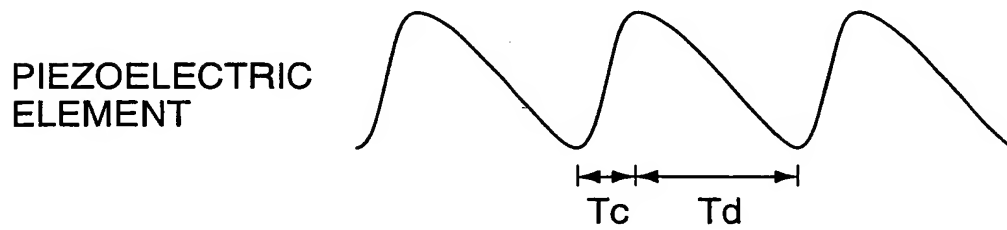


FIG.5

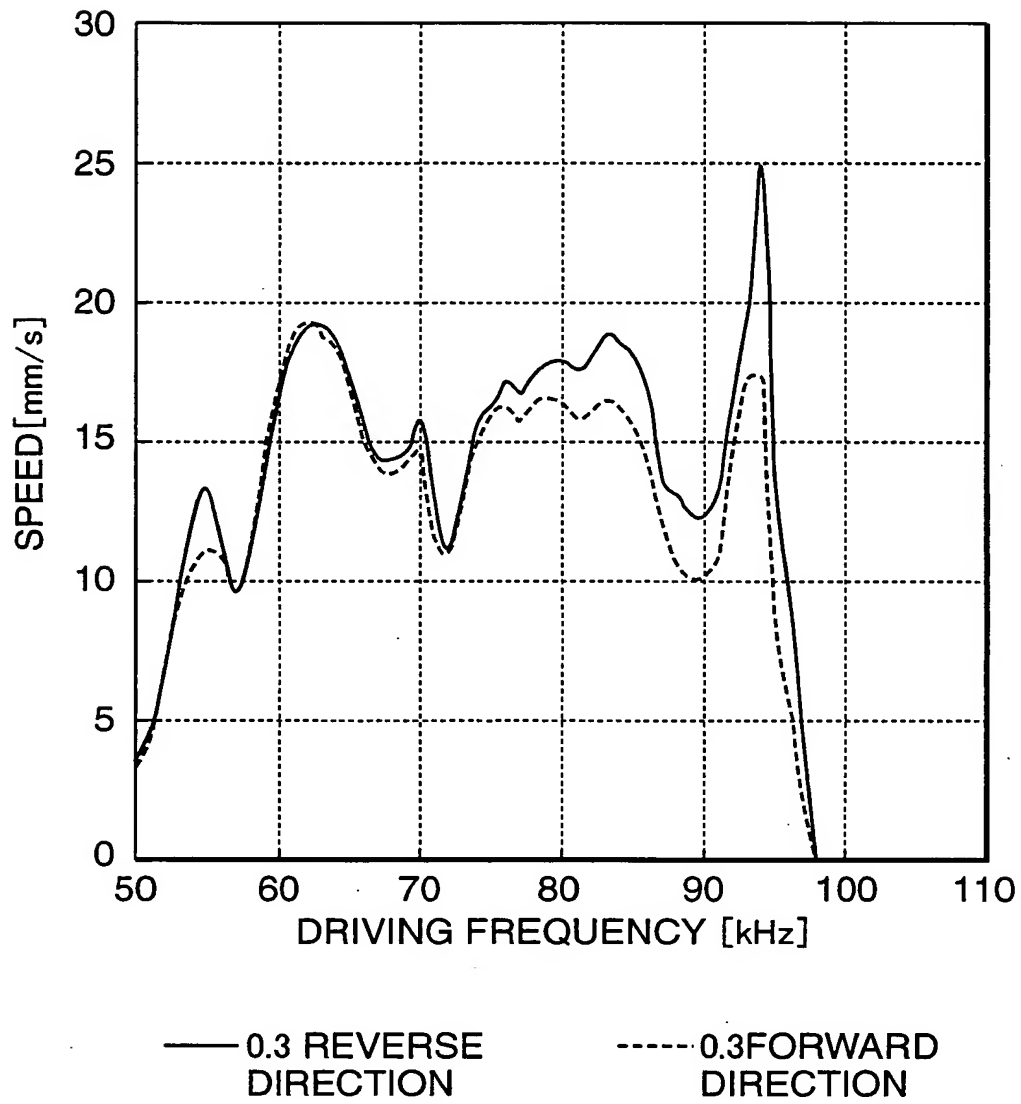


FIG.6A

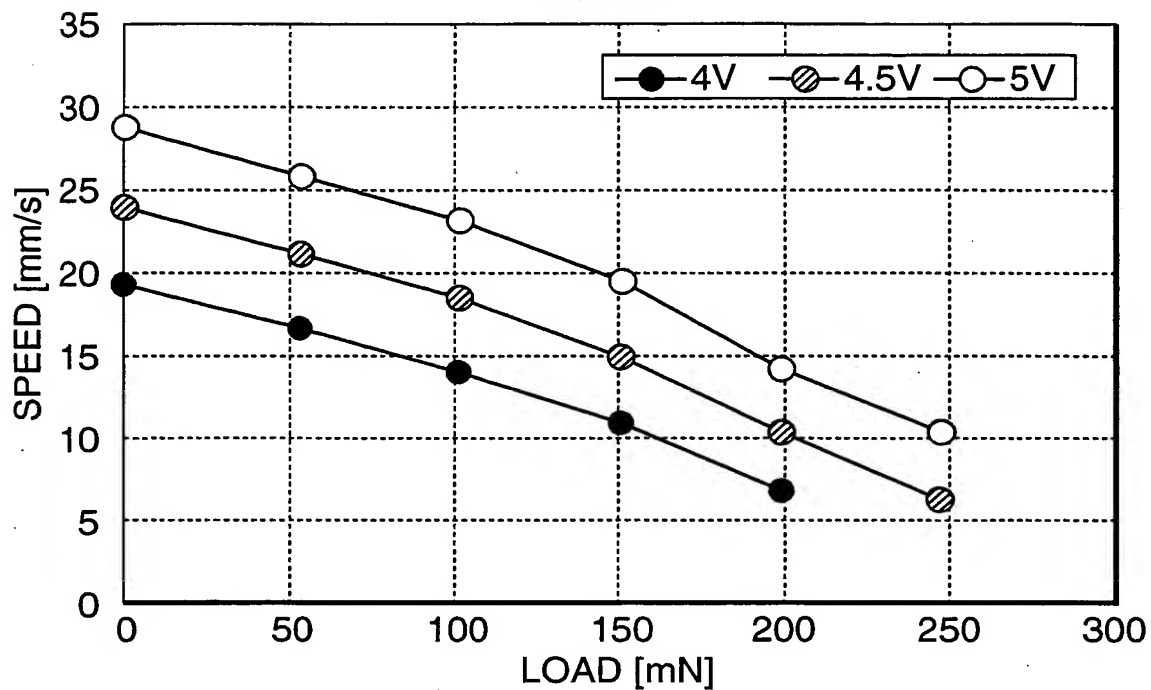


FIG.6B

LOAD [gf]	LOAD [mN]	4V	4.5V	5V
		REVERSE DIRECTION	REVERSE DIRECTION	REVERSE DIRECTION
0	0	19.43	24.05	28.91
5.32	52.136	16.63	21.3	25.95
10.32	101.136	14.02	18.54	23.16
15.32	150.136	10.82	14.81	19.66
20.32	199.136	6.86	10.42	14.27
25.32	248.136		6.23	10.37

FIG.7

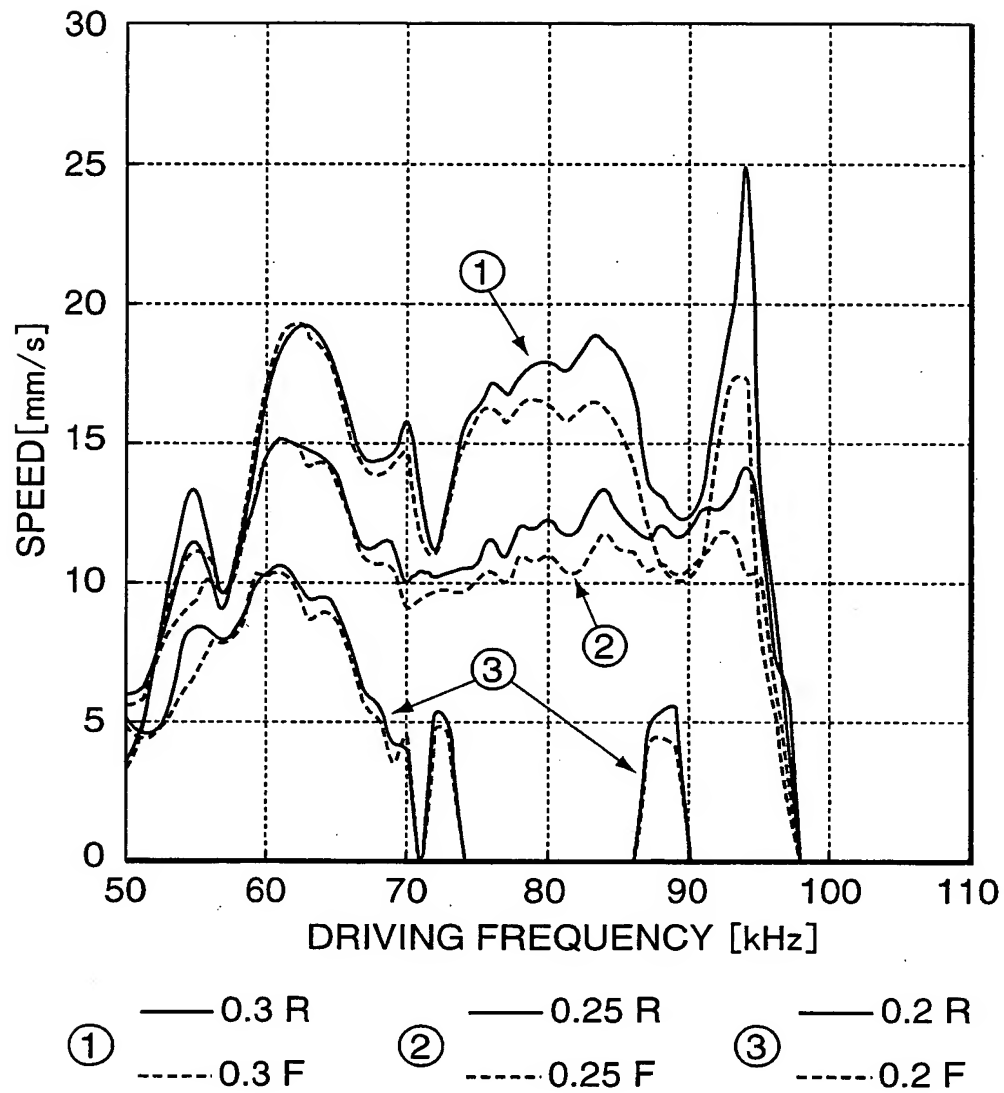


FIG.8

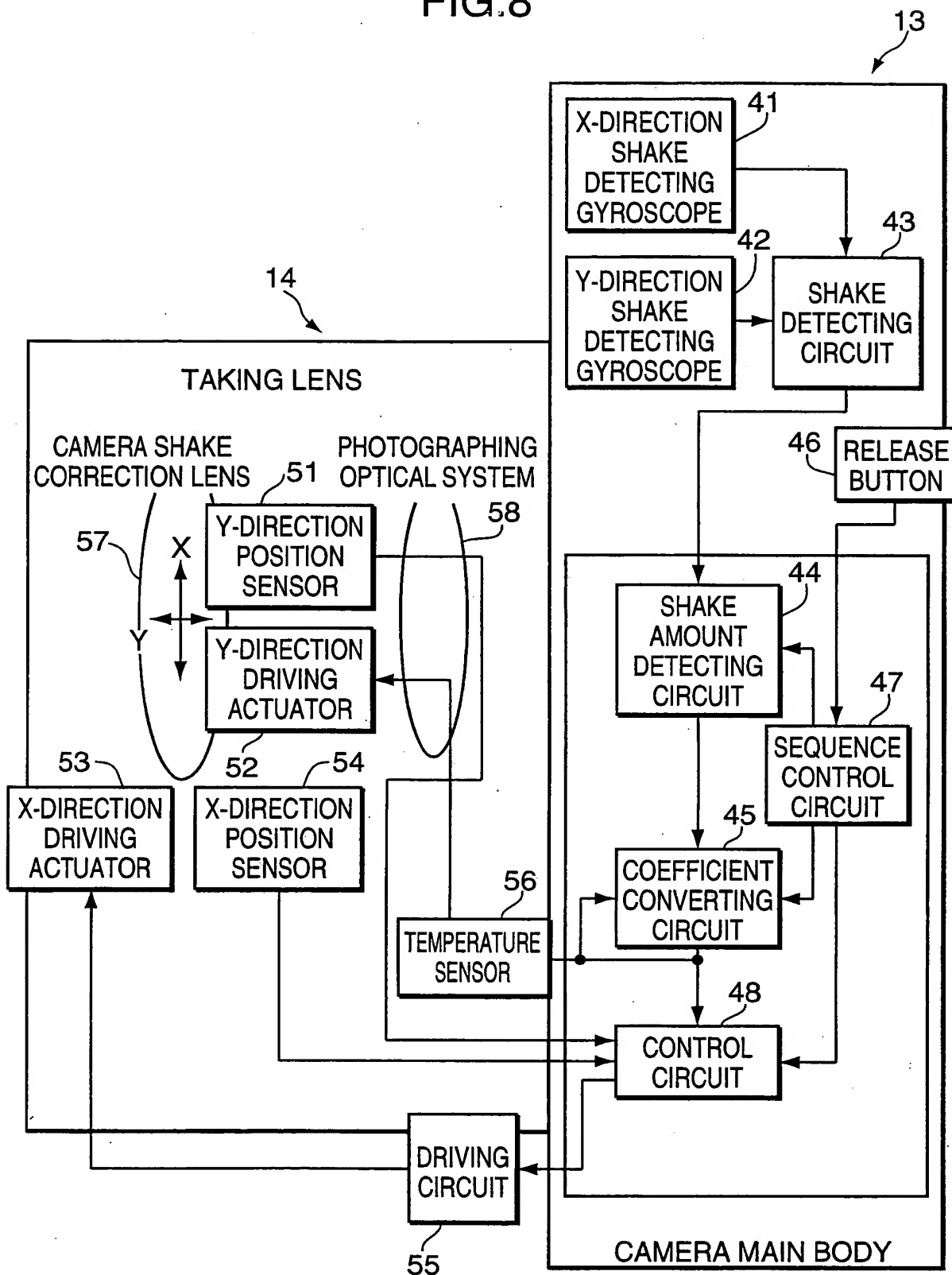


FIG.9

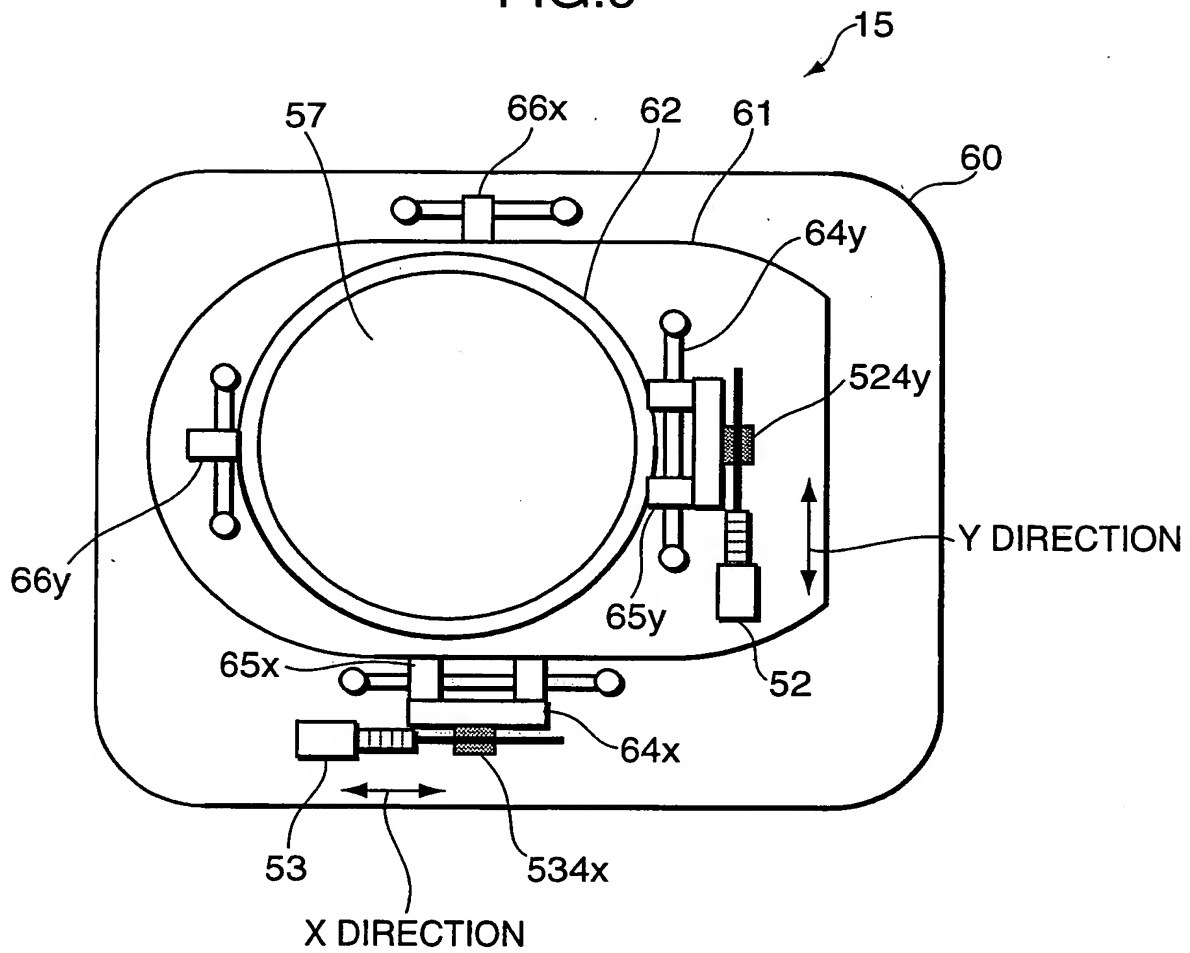




FIG.10

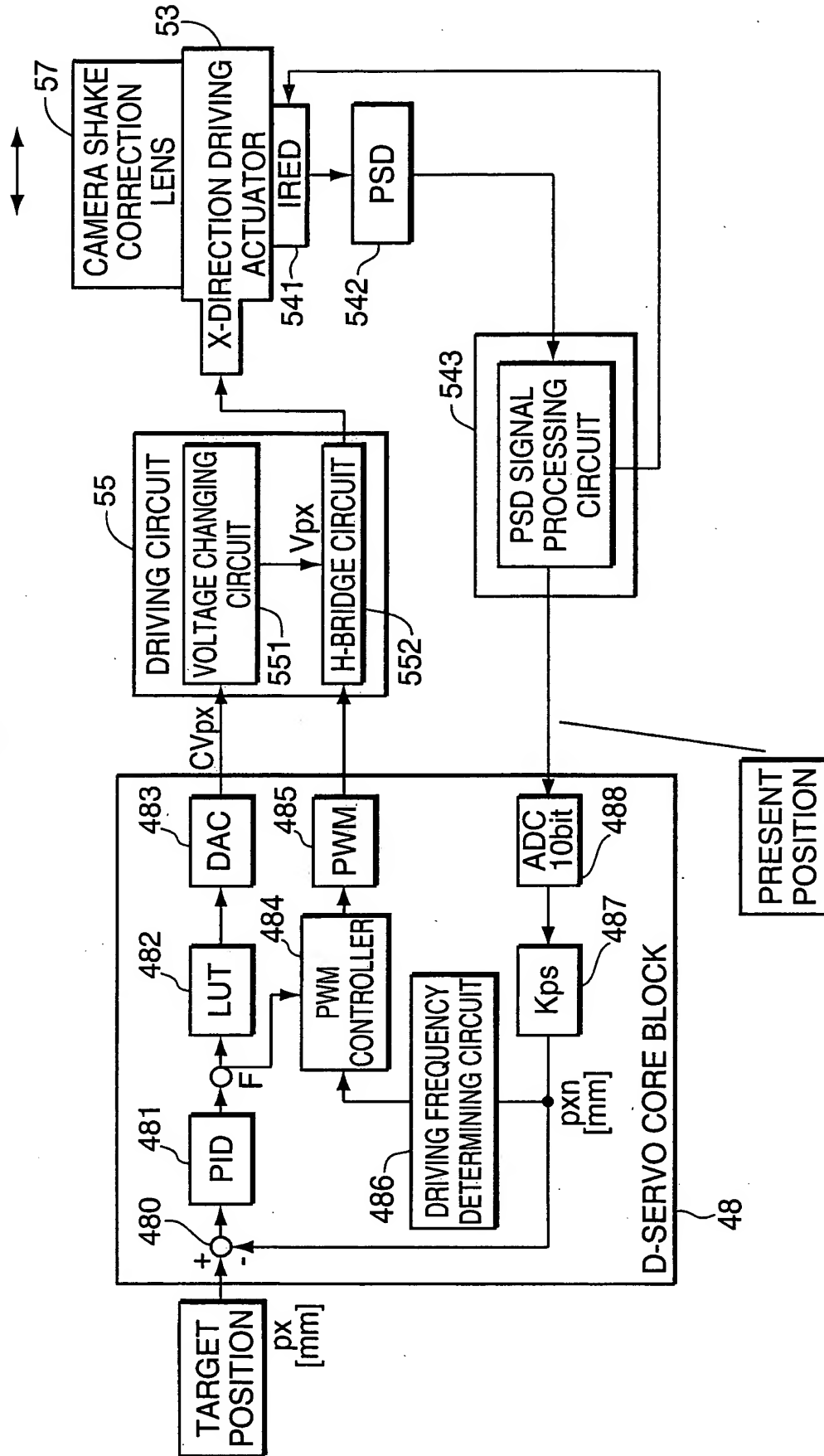
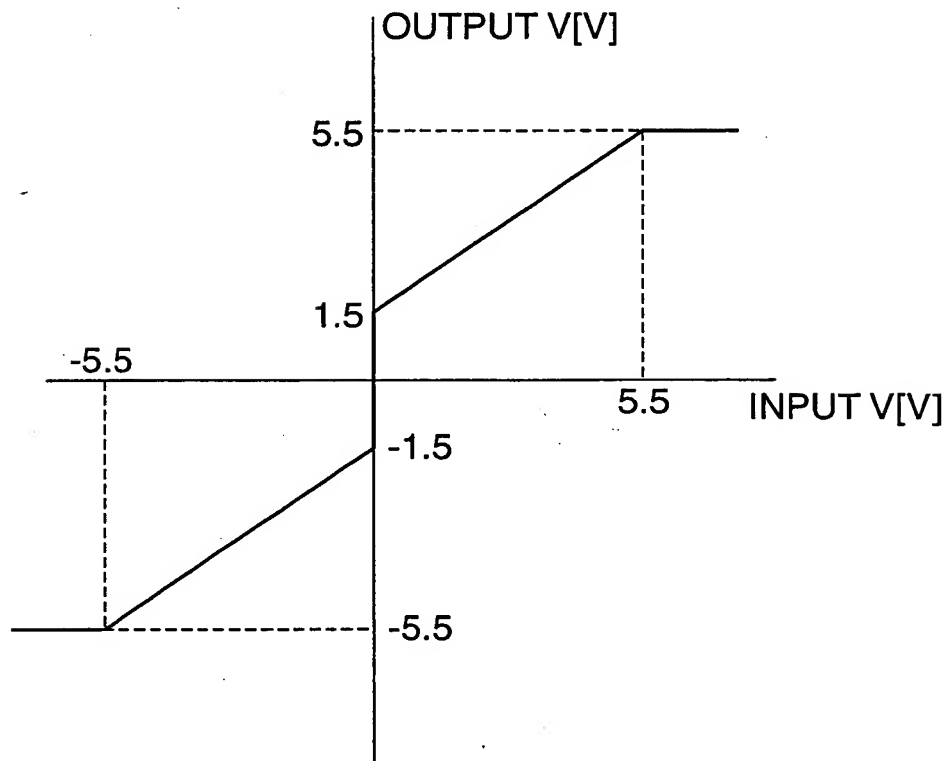


FIG.11



VOLTAGE LOOK-UP TABLE (482)

FIG.12

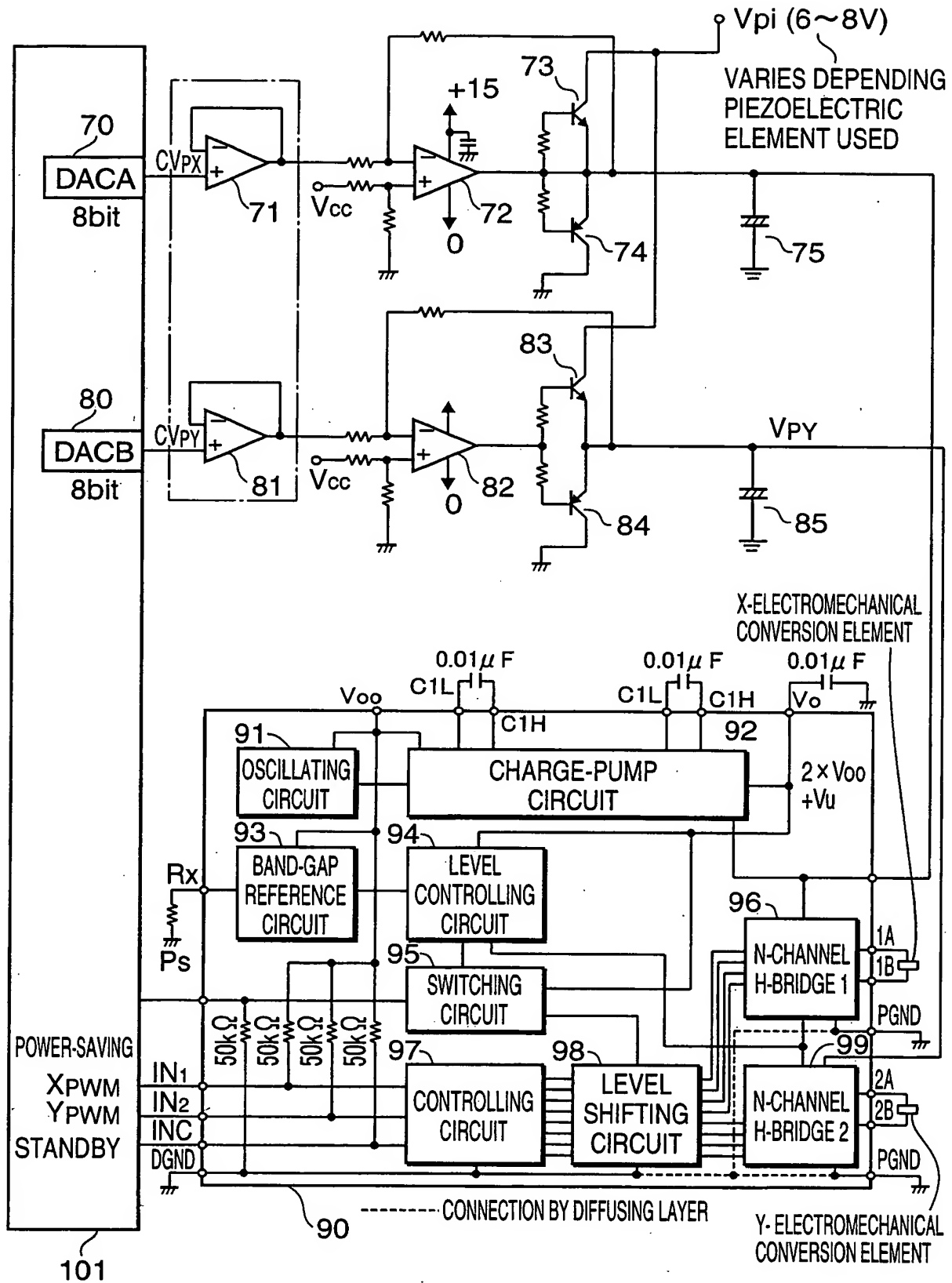


FIG.13A

INC	IN1	IN2	H1	H2
H	H	H	F	F
H	L	H	R	F
H	L	L	R	R
H	H	L	F	R
L	x	x	STOP	

F : FORWARD  
R : REVERSE

FIG.13B

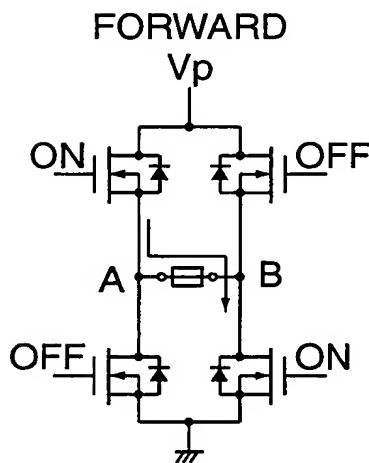


FIG.13C

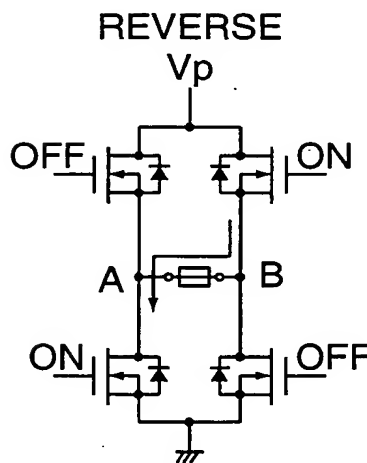


FIG.13D

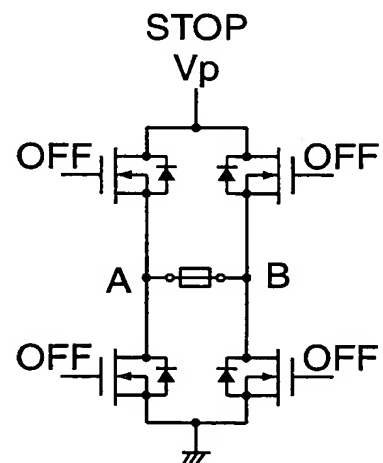


FIG.14A

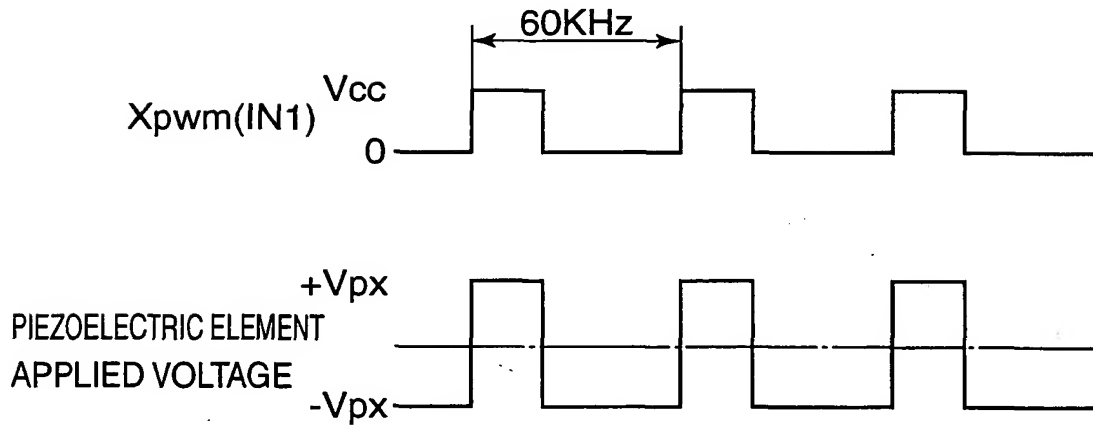


FIG.14B

